energized

Volume 5 THE MONTHLY NEWSLETTER FOR ENERGY MANAGERS AND PUBLIC AFFAIRS OFFICERS Issue 7

Message To Energy Managers:

On 22 April, the president signed a new executive order mandating a 20% reduction in vehicle petroleum consumption by 2005.

DON is dedicated to setting up alternative fuel service stations to make operating alternative fueled vehicles (AFVs) a practical option. The station recently opened at the Navy Exchange Service next to the Pentagon, for example, will enable DON and other service vehicles in the Washington, DC area to fill up with ethanol and compressed natural gas.

The U.S. Marine Corps has done a great job procuring AFVs, exceeding its FY99 requirement. The Navy has made great progress in FY99, doubling acquisitions over FY98, but much more needs to be done. San Diego, Hampton Roads, Port Hueneme, and others are expanding their AFV fleets. If you handle vehicle acquisitions, check out alternative fueled vehicles for your next purchase.

AUTEC is one example of how we can replace our existing ground fleet with non-petroleum-fueled vehicles.

Publications are available to help you select alternative-fueled and fuel-efficient gasoline models and operate your current vehicles more efficiently. Check them out.

Sincerely,

Bill Tayler

William F. Tayler
Navy Shore Energy
Program Manager

EXECUTIVE ORDER TO CUT PETROLEUM USE

DOD OPENS 1ST FEDERAL MULTI-ALTERNATIVE FUEL SERVICE STATION

On Earth Day 2000 President Clinton signed a new executive order, "Greening the Government through Federal Fleet and Transportation Efficiency," requiring agencies to reduce their fleet's petroleum consumption by at least 20% by the end of FY 2005. Agencies have numerous options to achieve this reduction, including the use of alternative fuels, which is the cornerstone of the Department of Defense plan to meet the 20% reduction.

As proof of DOD's commitment to alternative fuels, 1 May the federal government opened its first multi-alternative fuel service station. Participating in the ribbon-cutting ceremony were Deputy Under Secretary of Defense (Environmental Security) Sherri W. Goodman; Assistant Secretary of the Navy Robert Pirie; Deputy Secretary of Energy T. J. Glauthier; Executive Director of the National Ethanol Vehicle Coalition Phillip Lambert; and President of the Natural Gas Vehicle Coalition Richard Kolodziej.

The station, owned by the Navy Exchange Service, is located in Arlington, VA, next to the Pentagon. Development of the station was the result of a joint effort of several federal agencies, non-government organizations and commercial entities. The station will service federal vehicles with two clean-burning alternative fuels: ethanol (a mixture of 85 percent ethanol and 15 percent gasoline), and compressed natural gas.

Cars, trucks and buses contribute 50 percent of urban air pollution. Alternative fueled vehicles produce substantially less pollution than conventionally fueled vehicles and reduce greenhouse gas emissions. In addition to significant environmental benefits, the use of alternative fuels enhances our national security by reducing our dependence on imported petroleum products. Currently, the United States imports more than 50 percent of its petroleum requirements.

"This station will benefit the region—the District, Maryland and Virginia—not just the federal government," said Glauthier. "We expect an estimated 200,000 gallons of ethanol fuel to be pumped out of the Pentagon site in the first year alone. These numbers will increase when three additional refueling sites for flexible-fuel vehicles come on line later this year in the Washington, D.C. area."

"The station is the first of seven gas stations offering those fuels here, and I'll order every White House vehicle that can use these fuels to make the switch," said President Clinton in his radio address on Earth Day. The president estimated that his "executive order will cut oil consumption by 45 million gallons a year, help stop global warming and ease pressure on gas prices."

DON Energy Awareness Website: Access the tools on the Navy Energy website for ideas, planning tips, and tools. Set your browser to **http://energy.navy.mil** and scroll down the left-hand column to the Awareness pick.

AUTEC'S
ELECTRIFYING TRANSPORTATION

"They're just not convenient," say many people about electric vehicles (EVs). Not Bill Lescalleet. As Supervisor of Transportation of the ground transportation fleet at the Naval Underwater System Center's Atlantic Undersea Test and Evaluation Center (AUTEC), Lescalleet says, "Convenience is the primary reason we have such a large EV fleet here."

AUTEC occupies one square mile on Andros Island, Bahamas, due east of Key West, Florida. Just over half of the base's 145 ground transportation vehicles are battery-powered golf carts. In addition, AUTEC personnel own and operate about as many battery carts as the government.

AUTEC started out with 20 electric carts in the 1980s, and added to its EV fleet several times. Last year AUTEC placed an order for 11 Neighborhood Electric Vehicles (NEVs) for delivery in 2000. NEVs are more sophisticated than golf carts and are increasingly being used in gated communities with reduced speed limits.

What makes EVs so convenient? You just need to register a cart. No insurance is required. If no one on base has one to sell, you can buy one through the Base Exchange. You avoid paying shipping costs and taxes. It's also duty-free.

AUTEC has all sorts of electric carts: two-seaters, four-seaters, dump-type flat bed "trucks" with short or long beds. Some have rails with a gate and a little cargo area in the back. Some are equipped with plastic windows and three-sided rain shields.

"Most departments don't carry heavy loads," Bill explains. "If you have good batteries in them, you can generally run the carts 3-5 days before they need to be recharged." Recharging is no problem, because people can hook up to their home's 110 outlet.

Cost is another selling factor. The last round of Club Cars cost about $5,500 for the two-seaters; four-seaters were another $1,000.

Carts are easier and less expensive to maintain. Golf carts require 3-4 hours for preventive maintenance, while gasoline engines require 6-8 hours. Carts have no oil or filters to change. Annual maintenance costs average around $500 per unit, versus about $2,000 for each gasoline vehicle.

Batteries and computer modules are the major repair items. Computers cost around $300, about the same price as a battery pack containing six batteries. But it's rare to have to replace all six batteries at once.

Surprisingly, golf carts typically outlast gasoline vehicles. The salt environment on the island causes cars to rust quickly. Most golf carts, on the other hand, don't corrode because they are made of fiberglass or aluminum. Since conventional vehicles don't reach highway speeds on base, engines and exhaust systems don't last as long either.

Golf carts can't go off base because of Bahamian government safety regulations. This is their major disadvantage, but it's not a big problem. An off-base bus provides free transportation to a few neighboring areas on a regular schedule from 5 am to 11 pm. And everyone knows someone with a gasoline vehicle if a group wants to go off base.

Remote Site 2, located about 15 miles from base, is the only place a gasoline vehicle is needed. However, things there are also changing. AUTEC just brought over eight Chevy S-10 electric pickups to evaluate. These trucks can easily make the trip to the remote site.

All new AUTEC fossil fuel vehicle requisitions must be accompanied by a "non-electric" justification. What is the future for EVs at AUTEC? Long-term: total elimination of gasoline vehicles.

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DON ALTERNATIVE FUELED VEHICLE (AFV) ACQUISITIONS

In FY99, DON purchased or leased 1,195 AFVs, representing 66.6% of fleet acquisitions covered under Executive Order 13031, "Federal Alternative Fueled Vehicle Leadership." The U.S. Marine Corps met, and even surpassed, EO 13031's 75% requirement for 1999. The Navy, and the Department of the Navy as a whole, fell short, but Navy AFV acquisitions improved dramatically last year. The Navy acquired more than twice as many AFVs in FY99 as in FY98.

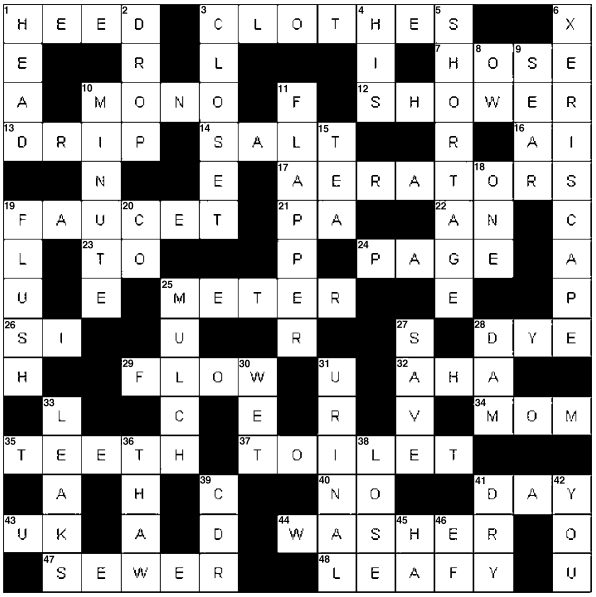
AFV availability has improved but is still less than optimal. CNG has the best AFV availability. DON's most popular models, however, the minivan and compact pickup truck, are not available in CNG. Also, many mid-size pickups are purchased as stake trucks and other utility trucks. None of these configurations are available with the alternative fuel option. Dodge Caravan minivans are available with the E85 option, but cannot be sold in California where more than one-third of DON's light duty vehicles reside. DON will continue to request compact pickup trucks and minivans in alternative fuel configurations for which infrastructure is available.

The lack of AFV fuel stations is a major challenge to compliance. DON has been working at certain locations to encourage the construction of new alternative fuel stations. PWC Great Lakes, for example, secured a temporary compressed natural gas station and plans to acquire a permanent station this year. PWC Great Lakes has received a grant to support an E85 fueling site from the Illinois Corngrower's Association and the Ethanol Vehicle Coalition. PWC Pensacola is reviewing CNG fueling equipment options. DON has held discussions with local propane suppliers in Hawaii and will begin acquiring propane AFVs when a fuel site is installed near PWC Pearl Harbor. DON will continue to hold discussions with local fuel suppliers, the Defense Energy Support Center, and the Clean Cities Coalition to secure alternative fuel at large vehicle fleet locations.

DON FY99 Alternative Fueled Vehicle Acquisitions

	Navy	Navy	Navy	USMC	USMC	USMC	DON
Light Duty AFVs	**Purchased**	**Leased**	**Total**	**Purchased**	**Leased**	**Total**	**TOTAL**
E85 (85% Ethanol) flex-fuel vehicles	208	206	414				414
Compressed Natural Gas (CNG) dual-fuel vehicles	115	11	126		268	268	394
CNG dedicated vehicles	99		99		212	212	311
Electric Vehicles (includes credits)		22	22				22
Propane/Liquid Petroleum Gas (LPG) dual-fuel vehicles		7	7				7
Medium-duty vehicles	**44**		**44**				**44**
Heavy-duty vehicles	**3**		**3**				**3**
TOTAL AFVs	**469**	**235**	**715**		**480**	**480**	**1,195**
% of AFVs of total vehicles acquired in FY99			**58%**			**84.7%**	**66.6%**

ANSWERS TO LAST MONTH'S PUZZLER



Check it Out

GREEN TRANSPORTATION PUBLICATIONS

Public interest in "green" transportation is accelerating, especially as gasoline prices rise. New publications on the subject are appearing almost as quickly as the fast pace by automakers scrambling to produce a greater variety of less polluting vehicles in greater volume. Check out the following:

The American Council for an Energy-Efficient Economy (ACEEE) has just updated its publication **Green Book: The Environmental Guide to Cars and Trucks—Model Year 2000,** a consumer guide that ranks cars, vans, pickups, and sport utility vehicles according to environmental friendliness—air pollution, global warming, and fuel efficiency.

"Green Scores" are provided for all 2000 makes and models, and a "Best Of '2000" section features the "greenest" models in each class. Listings on electric and alternative fuel vehicles complement listings of gasoline and diesel vehicles.

For those of you unable to buy a new "green" vehicle, tips are provided to keep your existing vehicle running cleanly and efficiently.

Green Book: The Environmental Guide to Cars and Trucks—Model Year 2000 is available from ACEEE, 1001 Connecticut Avenue, NW, Suite 801, Washington, DC 20036. Phone: (202) 429-0063 Fax: (202) 429-0193 E-mail: ace3pubs@ix.netcom.com. The cost is $8.95 plus shipping & applicable taxes. The book also is available online at GreenerCars.com. The free, preview pages of the site include the "Best of 2000," listing the top-rated vehicles in each size class. Consumers can buy one month of full online access for $8.95, or for $19.95 they receive an annual subscription that includes updates, feature articles, and green ratings for new model releases throughout the year.

If you're interested in keeping abreast of electric vehicles and related topics, then consider subscribing to *Electrifying Times*, an international magazine on electric vehicles.

Electrifying Times covers topics such as: Electric Vehicles, Alternate Fuel Vehicles, Hybrid Electric Vehicles, Fuel Cell Electric Vehicles, Battery Technology, and Advanced Propulsion Systems.

An annual subscription covering three issues costs $12 and can be obtained by sending a check to: Electrifying Times • 63600 Deschutes Market Road • Bend, OR 97701

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ENERGIZED is a publication sponsored by the Energy and Utilities Management Division, Naval Facilities Engineering Command.

Printed by the Naval Facilities Engineering Service Center

NAVY / MARINE CORPS
ENERGY EFFICIENCY

Department of the Navy
Commanding Officer
NFESC
Code: ESC 22
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